



Ergonomic, "Slim-line" handle design

Model D1000 Handheld Homogenizer

- + Homogenize most samples in under 30 sec.
- + For volumes from 100µl to 250ml
- + Supplied with both 5mm and 7mm generator probes

Technical Data:

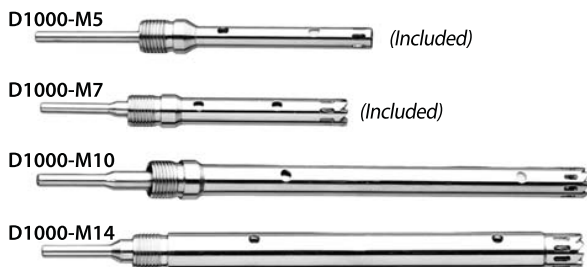
Speed Range:	8,500 to 30,000 rpm
Capacity:	0.1 to 250ml
Noise Level:	< 70 db
Operating Temp. Range:	+4°C to +65°C
Dimensions: (without generator)	1.8 x 2.3 x 9 in. 4.5 x 5.8 x 22.5 cm
Weight:	0.6 kg / 1.35 lb
Electrical:	115V, 60Hz, or 230V, 50Hz
Warranty:	2 years

Benchmark's new handheld homogenizer, the D1000, is designed to rapidly homogenize, emulsify, suspend and disrupt biological samples. Ideal for use with microtubes, the homogenizer works well with samples from 0.1ml to 250ml (depending upon the generator probe used).

The D1000 is a rotor stator homogenizer, and works by drawing the sample, in liquid, into the generator probe with the variable speed rotor, and then forcing it out through the slots in the stator. This achieves mechanical shearing of the sample. As the sample is repeatedly drawn up and forced through the stator, additional shearing takes place. Most samples are completely homogenized in 30 seconds or less. A powerful, 130W motor drives the rotor at speeds from 8,500 to 30,000 rpm. Speed is adjustable in six steps to meet sample processing needs. A separate on/off switch allows the homogenizer to be left at the appropriate setting.

Generator probes are available in four sizes. The 5mm and 7mm diameter have a 50mm length for use with samples in microtubes. The 10mm x 115mm is ideal for use with 15 and 50ml tubes and 14mm x 130 mm, for 50ml tubes and vessels up to 250ml. The unit is supplied with one each of the 5mm and 7mm generator probes. All the generator probes are made of stainless steel and can be sterilized by autoclaving.

Available Generator Heads



Ordering Information:

D1000* *D1000 Handheld Homogenizer, 115V*
Includes: one 5mm (flat bottom) generator probe & one 7mm (saw tooth) generator probe

Optional Generator Probes:

D1000-M10 10mm x 115mm saw tooth, for 15 & 50ml tubes
D1000-M14 14 x 130mm saw tooth, for 50 to 250ml vessels
D1000-M5 5 x 50mm flat bottom, for microtubes, 5pk.
D1000-M7 7 x 50mm, saw tooth, for microtubes, 5pk.

D1000-ST Stand for D1000

* For 230V (EU plug), please add (-E).

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BEADBUG™

MICROTUBE HOMOGENIZER



- + Extremely powerful mixing action, for lysis, grinding or homogenization
- + Eliminates the cross-contamination associated with hand-held homogenizers
- + Faster and more effective than tissue grinders
- + Mix 1, 2 or 3 tubes simultaneously



Max. Capacity up to 3 x 2.0ml

Technical Data:

Speed Range:	2800 to 4000 rpm
Max. Capacity:	3 x 2.0ml (non-skirted)
Timer:	3 sec. to 3 min.
Operating Temp. Range:	+4°C to +65°C
Dimensions:	6.9 x 8.3 x 5.3 in. 17 x 21 x 13.5 cm
Weight:	2.2 kg / 5 lb
Electrical:	115V, 60Hz, or 230V, 50Hz
Warranty:	2 years

The BeadBug™ is a high energy benchtop homogenizer that sets the performance standard for personal sized cell disruption and lysis instruments. Simultaneous homogenization of up to 3 samples takes place (often within 45 seconds) inside the disposable 2ml screw cap microtubes. The optimized mixing motion causes rapid cell disruption through constant high velocity impact from the hardened micro-beads chosen specifically for your sample type.

Developed for samples too tough to be homogenized in a common lab vortexer, the BeadBug provides a convenient and economical alternative to the traditional, over-priced homogenizers on the market today. With up to three tube capacity and a foot print of just 7 x 8", the BeadBug is the ideal homogenizing instrument for low to medium throughput laboratories.

For Best Results, use with Benchmark prefilled tube kits:



Standard Glass beads (Acid Washed)



Triple-Pure™ (Molecular Biology Grade) Zirconium Beads

Ordering Information:

D1030* *BeadBug™* Microtube Homogenizer, 115V

Pre-filled Tube Kits: Include 2.0ml Non-Skirted Screw Cap tubes with caps, sealing rings and beads as specified below:

D1031-01	Standard glass beads, Ø0.1mm, 50pk.
D1031-05	Standard glass beads, Ø0.5mm, 50pk.
D1031-10	Standard glass beads, Ø1.0mm, 50pk.
D1032-01	<i>Triple-Pure</i> , High Impact zirconium beads, Ø0.1mm, 50pk.
D1032-05	<i>Triple-Pure</i> , High Impact zirconium beads, Ø0.5mm, 50pk.
D1032-10	<i>Triple-Pure</i> , High Impact zirconium beads, Ø1.0mm, 50pk.
D1032-15	<i>Triple-Pure</i> , High Impact zirconium beads, Ø1.5mm, 50pk.
D1032-30	<i>Triple-Pure</i> , High Impact zirconium beads, Ø3.0mm, 50pk.
D1032-SK	<i>Starter Kit</i> , 10 each of Ø0.1, 0.5, 1.0, 1.5 & 3.0 <i>Triple-Pure</i> Zirconium
D1033-28	Stainless Steel Beads, Ø2.8mm, 50pk. (Acid Washed)
D1031-T20	Empty Tubes (2.0ml), pack of 1000

* To order a product in 230V / 50Hz, please add -E to item number.

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Benchmark 

BEADBUG™ 6

MICROTUBE HOMOGENIZER

-  *Fast, efficient bead homogenization*
-  *Process up to six samples simultaneously*
-  *Sealed tubes - no cross contamination*
-  *Full range bead materials and sizes available to process a wide variety of sample types*



BEADBUG™ 6

MICROTUBE HOMOGENIZER

The *BeadBug™ 6* joins the large capacity *BeadBlaster™ 24* and personal sized *BeadBug™* as the newest member of the Benchmark homogenizer line.

Like the other members of the Benchmark Microtube Homogenizer family, the *BeadBug 6* utilizes a three dimensional shaking motion to disrupt samples. This motion, when combined with beads of the appropriate size and material, causes high velocity impacts with the sample and is an extremely fast and efficient method for releasing cellular contents, including nucleic acids and proteins.

Many different sample types, from cells in culture to organ tissues and bone can be homogenized in the *BeadBug 6*, most within 45 seconds. Programming the unit is very simple - just set the speed, time, number of cycles and pause between cycles, then press start. For convenience, the last programmed parameters remain in memory for repeated runs.

Sealed tubes prevent cross contamination in the *BeadBug 6*. Samples are simply loaded into the tubes along with the beads and placed in the unit for processing. After homogenization, tubes are spun briefly in a centrifuge, and the lysate removed with a pipette.

Designed to fit the needs of medium throughput laboratories, the *BeadBug 6* can simultaneously process up to six samples in 2.0ml tubes. With optional adapters, the unit will also accept two 5.0ml tubes. A full range of bead materials and sizes are available in both prefilled tubes and in bulk to meet all your sample processing needs.



Technical Data

Capacity	6 x 2.0ml or 2 x 5.0ml*
Speed	4.00 to 7.00m/s in 0.05 increments
Cycle time	0-90 seconds in 1 sec increments
Pause between cycles	0-90 seconds in 1 sec increments
Number of cycles	1-10
Acceleration/Deceleration	≤2 seconds
Noise level	<65db
Ambient operating temp.	+4° to 45°C
Dimensions (WxDxH)	22x35.5x20.5cm/8.6x14x8 in
Weight	9kg/20 lbs
Electrical	100-240V, 50-60 Hz
Warranty	2 years

*Requires 5ml adapters, sold separately

Ordering Information

D1036* *BeadBug 6* Microtube Homogenizer
D1036-A5 5ml adapters for *BeadBug 6*, set of 2

Tube Kits, prefilled with screw cap, 50 tubes/pack

D1032-01 Triple-Pure Zirconium, Ø 0.1mm, 2ml
D1032-05 Triple-Pure Zirconium, Ø 0.5mm, 2ml
D1032-10 Triple-Pure Zirconium, Ø 1.0mm, 2ml
D1032-15 Triple-Pure Zirconium, Ø 1.5mm, 2ml
D1032-30 Triple-Pure Zirconium, Ø 3.0mm, 2ml
D1033-28 Stainless steel, Ø 2.8mm, 2ml
D1032-60 Ceria based Zirconium, Ø 6.0mm, 2ml
D1034-MX Mixed format for soil, 2ml
D1034-28 Stainless Steel, Ø 2.8mm, 5ml**

Empty tubes

D1031-T20 2.0ml tubes, pk of 1000
D1031-RF 2.0ml tubes, pk 100, reinforced
C1005-SC5 5.0ml tubes, pk 500

Other bead types and bulk beads available. Call for details.

*115V with US plug. For EU plug, please add -E to cat no.

** Requires the use of 5ml adapters, sold separately



Other members of the Benchmark Bead Homogenizer family:

D2400 *BeadBlaster 24*, 24 x 2.0ml capacity

D1030 *BeadBug*, 3 x 2.0ml capacity

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Benchmark 

BEAD BLASTER™ 24

Microtube Homogenizer

- + **Fast, efficient homogenization in about 35 seconds**
- + **For all sample types, from soft tissue to bone**
- + **High throughput - up to 24 samples**
- + **Sealed, 2.0ml tubes - no cross contamination**



MICROTUBE HOMOGENIZER





The BeadBlaster™ 24 completely lyses, grinds and homogenizes a broad variety of biological samples. Even the most difficult and resistant samples are fully homogenized, often in 35 seconds or less.

The stainless steel tube carrier subjects up to 24 samples to an optimized, high speed, 3D motion, producing high energy impacts between the samples and micro-beads to release cellular contents. After homogenization, samples can be centrifuged and the supernatant collected for further processing.

Operating parameters for the BeadBlaster 24 are set and displayed digitally. To protect fragile, heat sensitive samples, the unit can be programmed to operate in shortened consecutive cycles with a rest period in between. Up to 50 such programs can be stored in memory and recalled for future use. A transparent lid allows for visualization of samples, and features a mechanical lid lock that prevents opening of the lid when the BeadBlaster is in operation. A brushless motor reduces motor noise and provides maintenance free operation.

Benchmark offers an assortment of pre-filled tube kits for a variety of sample types. The popular Triple-Pure™ kits include acid washed, heat treated, zirconium beads. The beads are tested to be free of nucleases, making them ideal for molecular biology applications. A convenient starter kit (D1032-SK) is available to accommodate a broad range of sample types and optimize applications.

Technical Data:

Capacity:	24 x 2.0ml tubes
Speed:	4.00 to 7.00 m/s, 0.05 increments
Cycle time:	1 - 90 sec, 1 sec increments
Pause between cycles:	0-2 min, 1 sec increments
Max. cycles per program:	10
Program memory:	up to 50
Accel. / Decel. time:	<2 sec / <2 sec
Noise level:	<68db
Dimensions (WxDxH):	11 x 14.2 x 15.2 in / 28 x36 x38.5 cm
Weight:	55 lb / 25kg
Electrical:	100V to 240V, 50-60Hz, 600W
Warranty:	2 years



Standard Glass beads (Acid Washed)



Triple-Pure™ (Molecular Biology Grade) Zirconium Beads

Ordering Information:

D2400* *BeadBlaster™ 24* place Microtube Homogenizer

Pre-filled Tube Kits:

D1031-01	Standard glass beads, Ø0.1mm, 50pk.
D1031-05	Standard glass beads, Ø0.5mm, 50pk.
D1031-10	Standard glass beads, Ø1.0mm, 50pk.
D1032-01	<i>Triple-Pure</i> , High Impact zirconium beads, Ø0.1mm, 50pk.
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D1032-15	<i>Triple-Pure</i> , High Impact zirconium beads, Ø1.5mm, 50pk.
D1032-30	<i>Triple-Pure</i> , High Impact zirconium beads, Ø3.0mm, 50pk.
D1032-SK	<i>Starter Kit</i> , 10 each of Ø0.1, 0.5, 1.0, 1.5 & 3.0 <i>Triple-Pure</i> Zirconium
D1033-28	Stainless Steel Beads, Ø2.8mm, 50pk. (Acid Washed)
D1031-T20	Empty Tubes (2.0ml), pack of 1000

* Supplied with US plug, for EU plug, please add (-E) to item number.